

Application No.: 10/521,547

Docket No.: JCLA15751

AMENDMENTIn The Claims:

Please amend the claims as follows:

Claim 1 (currently amended) An electrode for projection welding comprising
a metallic main body,
an end cover of metal attached to the end of a main body and having a through hole,
and a guide sleeve of insulation material received in said main body and having a part
receiving hole communicating with the through hole in the end cover, and having an annular
groove formed around an outer periphery along an axial length of the guide sleeve,
said electrode having wherein a cooling passage is provided by the annular groove
along an entire axial length of the annular groove for fluid to cool said guide sleeve, wherein
said fluid is water, and said cooling passage extends circumferentially of the main body and has
an inlet port and an outlet port for cooling water.

Claim 2 (original) An electrode for projection welding as set forth in Claim 1, wherein
said guide sleeve has a throughgoing hole consisting of a major diameter section and a minor
diameter section, a container internally holding a magnet is slidably received in the major
diameter section, a guide pin of iron is slidably received in the minor diameter section, the
end of said container with the magnet exposed being joined to said guide pin, a compression
coil spring acts on the other end of said container, said minor diameter section being used as
said receiving hole.

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Claim 3 (canceled)

Claim 4 (original) An electrode for projection welding as set forth in Claim 1, wherein said cooling passage is in the form of an annular groove formed around the outer periphery of said guide sleeve.

Claim 5 (original) An electrode for projection welding as set forth in Claim 1, wherein a magnet is inserted in said guide sleeve, so that a part inserted in the receiving hole in the guide sleeve from the through hole in said end cover is attracted by the magnet, whereby the part is held to the electrode.

Claim 6 (original) An electrode for projection welding as set forth in Claim 5, wherein a detection current for parts detection flows through at least said magnet, said part, said end cover, and said main body.

Claim 7 (original) An electrode for projection welding as set forth in Claim 2, wherein an electric wire is connected to a washer receiving the end of said compression coil spring opposite to said container, an insulation cup is interposed between the washer and the main body, and an electricity-passing circuit is established with a path including the washer, compression coil spring, container, guide pin, part, end cover and main body.

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Claim 8 (original) An electrode for projection welding as set forth in Claim 1, wherein an air piping and a drain hole communicating with each other are provided for blowing compressed air into the main body.

Claim 9 (previously presented) An electrode for projection welding as set forth in Claim 1, wherein said fluid is air, which is supplied from an inlet formed in the main body and is discharged outside through an air passage formed in the guide sleeve, a clearance between the guide sleeve and the end cover, and the through hole in the end cover.